

TIOGA ROAD *(Grant Sierra Mining Road)*  
Yosemite National Park Roads and Bridges  
Between Crane Flat and Tioga Pass  
Tuolumne Meadows vicinity  
Tuolumne County  
California

HAER NO. CA-149

HABS  
CAL  
55-TUOLM,  
1-

~~PHOTOGRAPHS~~

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD  
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HISTORIC AMERICAN ENGINEERING RECORD

TIOGA ROAD  
[Great Sierra Mining Road]  
HAER No. CA-149

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I. INTRODUCTION

Location: Between Crane Flat and Tioga Pass, <sup>Tuolumne Meadows,</sup> Yosemite National Park, ~~Mariposa~~ and Tuolumne counties, California.

UTMs: Old Tioga Road  
East end: Tioga Pass  
Tioga Pass quadrangle  
11/301600/4198125  
West end: Ackerson Meadow vic.  
Ackerson Mountain quadrangle  
11/248010/4189850

New Tioga Road  
East end: Tioga Pass  
Tioga Pass quadrangle  
11/301600/4198125  
West end: Crane Flat  
Ackerson Mountain quadrangle  
11/253400/4181750

Date of Construction: Old road: 1882-83  
New road: 1958-61

Designer and Builder: Old road: Great Sierra Consolidated  
Silver Company  
New road: Bureau of Public Roads

Original and Present Owner: Yosemite National Park, National Park Service

Present Use: Park highway

Significance: The highest mountain highway in California, the Tioga Road is significant for its associations with the early gold mining industry and for its importance in transmontane travel.

Project Information: Documentation of the Tioga Road is part of the Yosemite National Park Roads and Bridges Recording Project, conducted in summer 1991 by the Historic American Engineering Record.

Richard H. Quin, Historian, 1991

## II. HISTORY

This is one in a series of reports prepared for the Yosemite National Park Roads and Bridges Recording Project. HAER No. CA-117, YOSEMITE NATIONAL PARK ROADS AND BRIDGES, contains an overview history of the park roads.

### HISTORY OF THE TIOGA ROAD

There was little white interest or knowledge of the High Sierra section of the Yosemite area until 1852, when Lt. Tredwell Moore and a detachment of the Second Infantry returned from a punitive expedition against Chief Tenaya's Indians bearing a few gold-laden quartz samples. Moore and his men had penetrated the area around Bloody Canyon on the present park's eastern boundary in the Tioga Pass region. Excitement over their gold find led to prospecting and development. Leroy Vining, for whom Lee Vining, California at the base of Tioga Pass is named, established a camp on "Vining's Creek" in 1854.<sup>1</sup>

Interest in the potential gold fields led Tom McGee, a merchant and saloon keeper at Big Oak Flat, to reopen the western section of the old Mono Trail, an Indian route, clearing and cutting blazes to mark the path in 1857. Although it was mainly used as a route to mining camps at Dogtown (predecessor of the famous gold town of Bodie) and Monoville, some tourists followed the trail to see the high country by the late 1850s. The trail ran from Big Oak Flat to Tamarack Flat, then by Tenaya Lake to Tuolumne Meadows, then east over Mono Pass into Bloody Canyon and the Mono Basin.<sup>2</sup> The western slope Miwok Indians had used the old trail as a trading route with the eastern slope Piutes. This had been a foot trail only; Dr. Lafayette Bunnell stated the Indian routes "had been purposely run over ground impassible to horses."<sup>3</sup>

In the early 1860s, the California Geological Survey under Josiah D. Whitney conducted surveys in the area. Whitney noticed the current Tioga Pass (which he called MacLane's Pass) and suggested it might be better than the Mono Pass as a route across the mountains, being some 600' lower in elevation.<sup>4</sup> Newspaper reports indicate that a wagon road across the mountains through the pass was considered as early as 1862. In November of that year, a survey was run by civil engineer J. T. Haines for a route by Yosemite Creek, Tenaya Lake, and Tuolumne Meadows.<sup>5</sup> However, no construction resulted from the survey.

By this time, sheep were being herded into the high country meadows to graze over the summer. John Muir made his first trip to Tuolumne Meadows with a herd of sheep in 1869.<sup>6</sup> Sheep were common in the area until the Yosemite National Park was created in 1890, after which the U.S. Cavalry began a long campaign to expel them from the park.

A dentist, George W. Chase, staked a claim for the "Shepherd Mine" on Tioga Hill\* northwest of Tioga Pass in 1860, although he never opened the mine. Chase took his samples to Monoville to be assayed, and while there heard of the big strike at Aurora. Excited by the latest strike, Chase and his companions never returned to Tioga Pass. A shepherd named William Brusky (or Brosky) came upon the tin location marker for Chase's abandoned claim in 1874, did some prospecting, and located a rich find of silver ore.<sup>7</sup> By 1878, Brusky had filed on four claims along the lode.

Brusky was unable to finance a mining operation, and the claims were acquired by interests in Boston and New Bedford, Massachusetts, who organized the Great Sierra Consolidated Silver Company in December 1881. An English surveyor was

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\* This is near Gaylor Lake, not Tioga Peak, which is northeast of Tioga Pass.

engaged, and he estimated the value of the surface ore at \$12 million. The company began drilling the "Great Sierra Tunnel" on 25 February 1882 in an attempt to reach the lauded Shepherd lode underground. To facilitate the boring of the drift, the company brought some eight tons of machinery, including a steam engine and drills, up a rough mountain grade through Lundy Canyon. Grades were so steep that some of the equipment had to be lifted up with a block and tackle. It took two months to move the equipment over the 9-mile mountain stretch. A new mining town, Bennettville (Bennett City post office, later Tioga), soon sprang up around the mine site. The new estaminet was named for the company president, Thomas Bennett, and became the center of the Tioga Mining District.<sup>8</sup> Optimistic inhabitants predicted the town would grow to 50,000 inhabitants. To the south, other claims were soon filed on the Great Sierra Ledge by 1878; the mining town of Dana was active here by 1880, at which point a post office was established.<sup>9</sup>

By this time, there was so much activity that three speculators organized the Tioga Mining District. Within a few years, more than 350 claims had been entered. Most of these produced nothing, but a few yielded sizeable profits. One of these, the May Lundy claim in present Lundy Canyon, yielded more than \$3 million in silver; however, due to its distance from the Tioga District recorder, it and some neighboring mines were made part of the later Homer Mining District. Some of the smaller mines in the Tioga Pass area fell under control of larger operations, such as the Mount Dana Mining Company and the Great Sierra Mining Company.<sup>10</sup>

Getting supplies to the mine from the east side of the Sierra had proved very difficult, and the owners of the Great Sierra Consolidated Silver Company decided a new wagon trail from the west should be built. They expected to be hauling precious ore as well, and needed a better and more direct way to ship it to market. The Central Pacific Railroad reached Copperopolis and a connection with the Big Oak Flat Road to the west; this road ascended to Crocker's Station on the west slope of the mountains. A new route to connect with the road and railhead would enable the ore to reach the lucrative San Francisco market much easier. The company proprietors decided to build a wagon road from Crocker's Station [near the present western boundary of Yosemite National Park] to Bennettville; they also hoped to eventually construct a railway along the same route and on to the Mono Valley down the Lee Vining Creek canyon. Accordingly, they formed the "California and Yosemite Short Line Railroad," and used funds from the sale of "railway" stock to pay the costs of the road survey. The railway company was authorized to issue \$5 million in shares; however, only \$250,000 was actually subscribed. Civil Engineer R. F. Lord in 1881 estimated it would take \$17,000 to build the road.<sup>11</sup> Unlike the roads to Yosemite Valley, which were built to carry tourists, the new road would be constructed primarily to serve the mines.

The company engaged Charles N. Barney as project engineer and William C. Priest as his assistant. The location survey for the new road (and railway) began in the fall of 1882 from Crocker's Station. The survey was run by H. B. Carpenter and H. P. Medlicott, with John V. Ferretti and a Mr. Hall as chainmen. The crew reached White Wolf before winter set in. Construction began at the same time, and the first part of the road was pushed east as far as Carl Inn. Survey crews resumed their work in the spring and completed the line to Bennettville in July 1883.<sup>12</sup>

W. C. Priest, who was at the time president of the Big Oak Flat and Yosemite Turnpike Company [see HAER form No. CA-147], was in charge of construction of the new mining road. The *Mariposa Gazette* reported in April 1883 that he was ready to commence work from Crocker's on the west end as soon as he could put together 200 men. The paper noted that he would use "mountain Chinamen" but

none from San Francisco. A branch road was planned to Mount Gibbs and the head of Bloody Canyon. Priest stated that he expected construction to be completed by 1 August. The road would run for 56 miles from Crocker's Station to the Tioga mines.<sup>13</sup>

The road was built in less than six months. The chainmen were followed closely by the Chinese gangs, working with axes, picks, shovels, and dynamite. The 1st of August date was missed, but two weeks later the *Homer Mining Index* reported "The Great Sierra Wagon Road is nearing completion. Wagons from the other side [the west] were to have reached Lake Tenaya yesterday. Priest's powder gangs will skip the heavy blasting along the side of the lake for the present, after which 100 blasters will be put on to finish."<sup>14</sup>

The "Great Sierra Wagon Road" was finished on 4 September 1883. It was a well-constructed route, built by laborers equipped only with hand tools and blasting powder. It had easy grades ranging from 3-10 percent, substantial timber bridges on stone abutments, and occasional culverts and rock retaining walls. The new route left Crocker's Station on the Big Oak Flat Road, crossed the South Fork of the Tuolumne River a little way east, then climbed a divide to reach the high portion of the road at White Wolf. From there, it crossed Yosemite Creek on a bridge sited where the present Yosemite Creek campground is located, then passed through Porcupine Flat and Snow Flat before swinging southeast to pass along the north shore of Tenaya Lake on the blasted causeway and on fill sections. From there, it crossed Tenaya Summit to reach Tuolumne Meadows and followed an easy grade along the Tuolumne River and up to Bennettville for the last mile. The cost of the construction was \$61,095, or roughly \$1,100 a mile.<sup>15</sup>

Civil engineer John A. Dron, who had passed over the road soon after its construction, expressed his amazement at the early builders' feat:

The builders of the road, some twenty-five years before, had built its footing around the toe of a great granite dome shelving into the waters of the lake [Tenaya], by shifting huge slabs of granite into a level causeway along the lakeside, and we marvelled at the effort they had made with primitive equipment in a day when mountain roads were little more than trails.<sup>16</sup>

The road did not continue from the mine down the east slope of the mountains, and therefore was not a transmontane route; however, several trails continued down the east side of the Sierra from the mines. The company charged tolls for passage over the road; these were collected at Crocker's Station. An old signboard indicated the following tolls for use of the road:

Freight team, two horses . . . . .	\$5.00
Each additional horse . . . . .	1.00
Empty wagon, half rates	
Passenger teams, each horse . . . . .	2.50
Footmen, each . . . . .	1.00
Horse and rider . . . . .	2.00
Pack animals . . . . .	1.50
Loose horses and cattle . . . . .	.50
Sheep, goats and hogs . . . . .	.10 <sup>17</sup>

Archie M. Leonard began a livery service, using a ten-horse saddle train, over the road from Yosemite to Lundy in 1881. His service attracted attention in Lundy and Sodie newspapers, which suggested that Tenaya Lake would become "a watering place of note." Leonard later became one of the first civilian rangers of Yosemite National Park. Yosemite guide John L. Murphy, who settled

near the lake in 1878, boarded some of the passengers; earlier, he had put up some of the surveyors for the road.<sup>18</sup>

In 1881, the Yosemite Board of Commissioners discussed the construction of road from Yosemite Valley to the Tioga mines and on to Bodie. The route, which was proposed by a Mr. Murphy, would have climbed up Indian Canyon to reach the Sierra crest. This road was never built, but it was the first of a number of proposals for roads climbing out of the east end of the Valley to the high country around Tioga Pass.<sup>19</sup>

By July 1884, the Sheepherder Mine of the Great Sierra Consolidated Silver Company had been forced 1,784' into the mountain, and it was felt that the lauded vein of ore was nearly in reach. But the investors had by now expended their funds, and on 3 July the company owners sent a telegram to the mine superintendent, ordering him to cease operations. The workers immediately left, leaving tools behind in the tunnel and plates on the table in the their quarters. Not one ounce of silver or gold ore had been recovered. The mine and the wagon road had lost some \$300,000 of the investors' money. In 1888, William Swift, one of the backers, acquired all of the assets including the toll road. Swift made an effort to resume mine operations, but nothing came of this, either.<sup>20</sup>

After the closing of the mines, little traffic used the route, and the absentee owner did little to maintain the road. Few tolls were collected, too little to pay the collectors.<sup>21</sup> In 1890, when Yosemite National Park was created, Captain A. E. Wood, the first Acting Superintendent of the park, found the road was blocked with trees and washed out in places. He called it "a good mounted trail, and as such it is of much importance."<sup>22</sup> The government did not purchase the road, however. Rudolphus N. Swift, William's brother, received the mine property and road in 1895.<sup>23</sup>

In 1894, the *Homer Mining Index* indicated that the road was rapidly deteriorating. It noted "A man who recently came over the Great Sierra wagon road reports it to be in execrable condition. It should be kept in tolerable condition if the company wishes to hold it; but as a matter of fact, it should belong to the Government and be kept in prime order, as an eastern outlet to Yosemite Park."<sup>24</sup>

Despite its poor condition, some traffic was using the road. One party recommended the use of a light wagon, calling the road "very rough in places," but not impassable. Another stated that in the worst places, horses could be unhitched, and the wagon maneuvered across with a block-and-tackle.<sup>25</sup> It is safe to say that the early users never imagined the present congestion on the road.

The Great Sierra Wagon Road, by this time known as the Tioga Road, was in worse condition by 1896, when Lt. Col. S. B. M. Young of the Fourth Cavalry, Acting Superintendent of Yosemite National Park, described it in his annual report to the Secretary of the Interior:

. . . the Tioga Road has fallen into such bad repair as to be no longer passable by wagon. It leads eastward, as shown on the map, from a point 1 mile south of Ackersons, in township 1 south range 19 east, through township 1 south, in ranges 20, 21, 22, 23, and into 24 east, thence north through Tioga Pass, on to the summit of the Sierras at an altitude of about 9,000 feet.<sup>26</sup> It has been abandoned by the owners, and so far as i can learn no repairs have been made on it since the park was established. The road leads through nature's ideal park, and should be repaired and kept in

good condition for traveling carriages and baggage wagons. Southward from one camping point on it, the foot of Mount Lyell, on the summit of the grand Sierras (*sic*), can be reached by an easy trail for saddle animals in 11 miles. From another good camping point on it, Mount Conness, on the summit to the northward, can be reached in 10 miles over a good saddle trail, leading practically to the very summit, at an altitude of about 13,000 feet,<sup>27</sup> which commands one of the grandest views in the United States. Besides traversing innumerable mountain streams, glacier meadows, and lawns of luxuriant grasses and natural flowers, it touches the shore of Lake Tanaya (*sic*), skirts the bases of Mounts Hoffman and Dana, and passes within easy distance of the Ten Lake country, and many other places of great interest and natural beauty.

I am informed, by hearsay, that the original cost of building the road was about \$60,000. The foundation shows excellent work, intended to be permanent.<sup>28</sup>

The next Acting Superintendent of the park, Captain Alex Rodgers, repeated his predecessor's appraisal of the road in 1897, stating: "There is nothing to add to his remarks, except to call attention to the fact that the condition of this road grows worse from year to year."<sup>29</sup> Rodgers suggested that if the Tioga Road were taken over and repaired, many good meadows for grazing would be opened in the high country, providing an alternative to the already congested Yosemite Valley. He estimated that the costs of repairing the Tioga Road "would probably be not less than \$10,000."<sup>30</sup>

Rodgers was succeeded by Interior Department Special Inspector J. W. Zevely in 1898. (The military had been temporarily recalled to participate in the Spanish-American War.) Zevely rejected his predecessors' recommendations for the purchase of the Tioga Road, stating that the owners' rights had been extinguished by abandonment, and that in his opinion, the road already belonged to the Government. He called for an appropriation for its repair.<sup>31</sup>

Zevely was supported by Commissioners Marsden Manson and W. L. Ashe of the California Department of Highways, who noted that the state was endeavoring to construct an eastward extension of the Tioga Road into Mono County. At this point, the state had studied eastward routes down Lee Vining Creek, down Lee Vining and Mill creeks, or down Bloody Canyon. The Lee Vining Creek route was recommended by the surveyors, who thought the road could be built for about \$30,000. Commissioner Manson walked the entire route before giving his assent. To open up a complete Trans-Sierran route, Manson and Ashe urged that the federal government take control of the Tioga Road within the park, and initiate surveys and examinations for its reconstruction along easier grades and alignments.<sup>32</sup>

On 25 September of the same year, Zevely was replaced as Acting Superintendent by Capt. Joseph E. Caine of the Utah Volunteers, U.S. Cavalry. Caine's report also recommended that the government take control of the toll roads in the park, but only after sufficient funds were appropriated for their maintenance. He suggested that the cost of repairing the Tioga Road would probably run closer to \$15,000, but warned:

Unless immediate steps are taken to secure the control of this road to the Government and to place it in repair, it will soon become a thing of the past, and the vast amount of labor expended upon it [by its builders] will be a total loss.

I consider this Tioga road the most important highway in the park. With it all the points of the interest in the eastern end of the park are accessible to campers and tourists. Without the road these wonders of nature will remain shut out from the world, and a vast tract in the most attractive section of the park will be left an easy prey for the sheep men and hunters who come in from the East. The road is an absolute necessity for the patrolling of the park. Were it passable for wagons, a permanent outpost could be established and maintained at Soda Springs, and all of that important section could be patrolled from that point.<sup>33</sup>

In February 1899, the California state legislature appropriated \$25,000 for a "free wagon road" up the east flank of the Sierra range to meet the Tioga Road at Tioga Pass. The new state route would follow the Lee Vining Creek Canyon. Surveys for the road were conducted in 1901, and in 1903 the state voted a second \$25,000 for the project. Construction of the road began in 1904. By the end of the year, the lower four miles were built, but the contractor failed to meet its obligations, and in 1905 the state had to complete the work on this section. A contract was let for the upper part of the road, but the new contractor again failed to meet the project specifications, and the bonding company took over the work. The new state link was completed in 1910 at a cost of \$75,000, three times the original estimate.<sup>34</sup> The Tioga Road with which their new route connected remained a private track in poor condition.

A special commission to investigate the Yosemite National Park roads was appointed in 1899 by Secretary of War Russell A. Alger. In addition to reviewing the toll roads, the commission was to make recommendations for the extension of the Tioga Road down the eastern slope of the Sierra. When the commissioners made their inspection tour of the Tioga Road, they found the road blocked by fallen trees and army troops had to clear the route to travel over it. They found most of the culverts and all of the bridges intact, except for the bridge over Yosemite Creek, which had washed away earlier in the year.<sup>35</sup>

The commissioners hoped to find an easier connection with the Tioga Pass area from the Yosemite Valley. Hoping to avoid the area of heavy snowfall around Snow Flat, the commissioners looked into a route from the Valley up Tenaya Canyon to Tenaya Lake. However, this extremely steep canyon was quickly dismissed even as the route for a foot trail.<sup>36</sup> [The current *Yosemite Official Map and Guide* advises against hiking in the canyon due to the dangers involved.]

The Commission on Roads invited the owner of the Tioga Road to submit a deposition. Wilson and Wilson, attorneys for the owner, Rudolphus Swift of Acushnet, Massachusetts, replied. They noted that 51 miles of the road lay within Yosemite National Park. The road had been built with a maximum grade of 10 percent, was 10'-20' wide, and "skillfully laid out." The lawyers stated that the road had originally had an excellent surface, but admitted that it had not been maintained. The bridges had "fine" stone abutments, but most of the timbers were now rotten. Little traffic had used the road since the mines closed. They reported that the road had cost \$62,000 to build, and hinted that a sale to the government would be considered. The commission, however, estimated that a similar road could be built for \$58,000.<sup>37</sup> The commission recommended the purchase of all the toll roads within the park, and a bill was reintroduced into Congress. However, the sinking of the battleship Maine soon afterwards diverted congressional attention, and no funds were allocated for road acquisition.<sup>38</sup> In the meantime, the Tioga Road continued to deteriorate.

Major H. C. Benson, the Acting Superintendent of the park in 1907, criticized the condition of the Tioga Road in his annual report to the Secretary of the Interior:

. . . as this road leads through one of the most beautiful parts of the park, and is one of the most accessible, it should be put in a proper state of repair. Either the alleged owners of this road should be required to put it in a state of repair which will permit the passage of wagons, or it should be recognized that the alleged owners have no claim whatever to the road, as they certainly have not, no title ever having been acquired to the road except under the general law authorizing the construction of highways over public lands. After the road was built and the mine salted and sold together with the road, no work was done on it for many years, and no tolls were ever collected; therefore, the franchise as a toll road lapsed many years ago. It is recommended that the Government put this road in a condition for travel.<sup>39</sup>

By this point, nearly all of the bridges and culverts on the road had been washed away, along with much of the road surface.<sup>40</sup>

The Sierra Club also called for improvements to the Tioga Road. The *Sierra Club Bulletin* of 1909 heralded the completion of the new state motor road up the eastern slope as far as Tioga Lake. Although cars were at the time banned from the park, the *Bulletin* urged that the road be repaired "without delay, so as to afford one of the most wonderful trans-mountain roads in the world."<sup>41</sup>

Mary Hall Crocker, whose husband, H. R. Crocker, had once overseen road work for the owners, challenged Major Benson's assessment of the road's condition and value. In a letter to Benson, dated 28 September 1907, she argued that the owners had probably invested a quarter of a million in the road and the mine, and denied that the road was in nearly worthless condition. She held that only a few miles out of the 56-mile route were in poor condition, and attested to the traffic continually passing Crocker's Station at the west end of the road.<sup>42</sup> Despite her protest, two years later Benson reported again that the Tioga Road was still in "wretched condition."<sup>43</sup>

In June 1912, Mrs. Crocker filed a deposition concerning the road in which she stated that maintenance and repair work had been continually conducted on the road. This work for the most part consisted of repairing and replacing bridges, sawing logs which had fallen across the road, and removing other obstructions. The road, she said, had never been closed except by snow. Mrs. Crocker estimated that only \$10,000 would be required to put the road back in good order.<sup>44</sup>

Although Mrs. Crocker contested the charges that the road was in terrible condition, other evidence suggests it truly was. In 1912, Major W. T. Forsythe, Acting Superintendent of the park, wrote the Secretary of the Interior, describing the rescue of a stranded party on the road:

Several wagons passed over the road last summer, ...but also last summer I had to order a gratuitous issue of rations to a destitute family who were moving by wagon across the park from the east side by the Tioga Road because their team became exhausted on account of the difficult road and their food supply gave out before they could get through.<sup>45</sup>

Forsythe repeated the need for the government to take over the road. However, Swift's attorneys maintained that taxes had been paid on the road, and that

considerable funds had been expended to maintain the road to the original franchise standards. Tolls were not being collected because the revenues were insufficient to pay the collector. The owners' lawyers maintained that the government could assert no claim to the road except through lawful purchase.<sup>46</sup>

Early in 1915, Assistant Secretary of the Interior Stephen Tyng Mather became interested in acquiring the road for Yosemite National Park. Mather, a native Californian, had a great personal interest in Yosemite, and thought the road should be purchased in order to open up the magnificent high country portion of the park, and to provide for a trans-Sierran highway, there being no passes between the Sonora Pass to the north and the Walker Pass to the south, a distance of 270 miles. As the toll road had fallen into disuse, the owners were willing to sell it for \$15,000. Mather wanted to have the road opened in time for the major expositions scheduled for later in the year at San Francisco and San Diego, which would draw several thousand additional tourists to Yosemite. If the Tioga Road could be opened up, people from the eastern side of the Sierra range could visit the park. Mather, however, was informed that, as the road was in private ownership, government funds could not be used for its repair.

Mather was undaunted. "We've simply got to have that road," he told his assistant, Horace Albright. Albright explained that Congress had already finished with the annual appropriation for the national parks, and that the road purchase would have to wait. But Mather refused to wait. "I'll buy the road myself and give it to the government," he told Albright, and set about raising funds for its purchase.<sup>47</sup>

Mather contacted civic groups, business associates, the leading philanthropists of the day and personal friends in his effort to raise funds for the purchase of the road. Yachtsman Thomas Thorkildsen and philanthropist Julius Rosenwald each pledged \$1,000. The Sierra Club and the Modesto Chamber of Commerce came up with another \$6,000. Roughly half the required funds were raised, and Mather put up the remainder himself. Once the purchase was made, California automobile clubs agreed to pay the costs of repairing the road.<sup>48</sup>

As Mather was a public official, he could not himself convey such a gift to the government. He had the title to the road made out to a young attorney, William E. Colby, who had put together the paperwork for the deal and helped with the fund-raising.<sup>49</sup> Colby would later serve as president of the Sierra Club, and was a great supporter of park road projects, wanting to make the mountains accessible to more users. When the club attacked the National Park Service for the reconstruction of the central section of the road in the 1950s, Colby would defend the agency for its road programs.

Mather then found that the road could not be donated without authority from Congress for the government to accept the gift. He directed that an enabling act be drawn up for the House appropriations committee, which read "Hereafter, the Secretary of the Interior is authorized to accept donations of money, rights of land, and rights of way in our national parks." But the committee chairman, Representative John J. Fitzgerald of New York, viewed the bill with suspicion, and refused to accept the blanket legislation. With support from California's legislative delegation, Mather was able to convince Fitzgerald to support an amendment to the Sundry Civil Bill which would allow for gifts only to Yosemite.<sup>50</sup> The special act was passed on 3 March 1915, and on 10 April the road was formally transferred to Yosemite National Park for a consideration of ten dollars. The park then spent another \$30,000 on repairs to the road.<sup>51</sup>

The road was formally dedicated on 28 July 1915. Stephen Mather was in attendance, and broke a bottle filled with Pacific Ocean water over the symbolic "15,000 Rock," memorialized in contemporary cartoons and now enshrined in the Yosemite Museum.<sup>52</sup> The Tioga Road was opened to automobiles following the ceremonies, and by 1 October approximately 350 cars had made use of the road. The completion of the John Muir Trail in 1915 attracted many users. The park charged an additional five dollar fee for passage over the road.<sup>53</sup> One of the early motorists reported that the trip was truly exciting:

These 21 miles are the most exasperating I have ever driven. I will personally guarantee there isn't a trickier road anywhere. It is a good deal like a roller coaster, only rougher! but if your car's in good shape, and you are confident of your driving skills; if you are looking for an adventurous route and breathtaking scenery, there's no better place to find it than along the Tioga Road!<sup>54</sup>

Mark Daniels, Superintendent and Landscape Engineer of the National Parks, noted the significance of the acquisition of the Tioga Road in his 1915 annual report to the Secretary of the Interior. He wrote "it will be the most popular pass through the Sierra Nevada Mountains, as well as being a favorite for local drivers."<sup>55</sup> Daniels was not far off in his prediction; the road remains one of the most popular mountain drives in California.

The (old) Tioga Road left the Big Oak Flat Road at Crocker's Station (sometimes called "Crocker's Sierra Resort"). Passing Carl Inn 3 miles east, the road then struck off to the northeast to reach the small enclave of Aspen Valley. Here, Jeremiah Hodgdon in 1878 had built a two-story log cabin, later used by the road builders and patrolling cavalry. In the 1920s, several tourist cabins were built here and the small resort flourished until World War II. Nine miles further northeast along the Middle Fork of the Tuolumne River, the road swung back to the southeast near Harden Lake. From there, the road crossed the ridge to drop to Yosemite Creek where the present Yosemite Creek campground is located. It gained the ridge again, following it through Porcupine Flat and Snow Flat before dropping to Tenaya Lake. The road followed the north shore of the lake and headed northeast again to Tuolumne Meadows. From there, it followed the Dana Fork of the Tuolumne River before reaching Tioga Pass. The unsurfaced road was 12'-15' wide, and had grades of up to 15 percent.<sup>56</sup> The original entrance and checking station was located at Tuolumne Meadows; a checking station was added at Aspen Valley in 1918.<sup>57</sup>

The Tuolumne Meadows region soon saw more improvements. The Sierra Club built the Parsons Memorial Lodge at Lumbert Soda Springs in 1915. The striking stone building was designed by Berkeley arts-and-crafts architect Bernard Maybeck. The Sierra Club maintained ownership until 1973, when they sold the property to the National Park Service. Commercial interests were also attracted to the area. Hoping to attract the new road users, the Desmond Park Service Company erected a tourist camp on the old John Murphy place at Tenaya Lake in 1916. The camp flourished until 1938, when it was dismantled and replaced by the more remote May Lake High Sierra Camp. The Desmond Park Service Company also built the Tuolumne Meadows Lodge in 1916; operations were soon suspended on account of the war and the Desmond Company's failure. The Lodge was expanded and reconstructed in 1923 by its new operator, the Yosemite Park & Curry Company.<sup>58</sup>

Park Supervisor Gabriel Sovulewski oversaw the maintenance of the Tioga Road in the years immediately following its acquisition. In the spring of 1916, he assigned 24 men and two horse teams to repairing washouts. The crew removed more than 30 trees that were down across the road and rebuilt the bridge over

Yosemite Creek. Sovulewski noted that "there has been nothing but praise for the Tioga Road," but admitted "conditions are far from satisfactory and not as we would like to have them." Two years later, his crews used 1,200 pounds of blasting powder to blow 150 trees off the road. Storms later in the season caused nearly \$6,000 in damage to the road.<sup>59</sup>

In 1917, following the road's second season of public use, Yosemite superintendent Washington Bartlett Lewis reported on the popularity of the new route, and its importance as part of a wide western tourist circuit:

. . . mention should be made of the Tioga road crossing the central section of the park, a scenic highway which runs through Tioga Pass on the crest of the Sierra, where it connects with the Tioga State road in the Leevining Canyon. At Mono Lake the Leevining Creek road joins the State highway system on the eastern side of the mountains, running from the northern part of California through the Lake Tahoe region, thence to Mono Lake and the Owens Valley, and on to southern California. At Lake Tahoe this State road intersects the Lincoln Highway. It appears that both California and eastern motorists traveling over the Lincoln Highway to Lake Tahoe during the past season made the trip to Yosemite by way of Mono Lake and the Tioga road. In fact, one of the most popular automobile roads in California is the Lincoln Highway or its feeders from coast and central California points to Lake Tahoe, thence south on the State highway to the Tioga road, and over this scenic Federal link in the circle trip to the Yosemite, and finally back to the central valleys.<sup>60</sup>

The National Park Service was created in 1916, and Stephen Mather was chosen as its first Director. A bronze plaque marking Mather's contribution to the purchase of the Tioga Road was dedicated at Tioga Pass in July 1924.<sup>61</sup> Mather and NPS Assistant Director Horace Albright made an inspection of the Tioga Road by automobile in 1926. A local's enthusiastic driving over the twisting mountain road frightened Albright, who got out of the car at Tenaya Lake and hiked back to the Yosemite Valley.<sup>62</sup>

The old proposal for a direct road from Yosemite Valley to Tuolumne Meadows and the high Sierra area was reintroduced by the Secretary of the Interior in his 1919 annual report: "The proposed Yosemite Valley-Nevada Falls (sic)-Tenaya Road must be built, in order to give quick access to the Sonora section of the park and relieve traffic on the floor of Yosemite Valley." This route called for the road to climb out of the Valley along the Merced River canyon, rather than the rejected Tenaya Creek canyon to its north. The road would pass behind Half Dome and Cloud's Rest before turning north towards Tenaya Lake and Tuolumne Meadows. The Secretary claimed that construction of the road was the "first priority" of his department for Yosemite. Mather added his support for the proposal in an attached report. Mather repeated the proposal in his 1920 report, and requested an appropriation of \$1.5 million for construction of the road,<sup>63</sup> but the funds were not appropriated, and the plans for the road were shelved again. Park Superintendent Washington B. Lewis again suggested the construction of the road in 1924, along with a spur road from the top of Nevada Fall to Glacier Point.<sup>64</sup> Although the Yosemite Valley-Tuolumne Meadows road was never built, the continued proposals reflect the prevailing attitude among park management that better access should be provided for the motoring public. The Sierra Club at the time was in general agreement with this philosophy, and also supported the construction of the new road to Tuolumne Meadows.<sup>65</sup>

Following its acquisition by the federal government, the Tioga Road received regular maintenance and occasional improvements. Storms in the fall of 1922 forced the Park Service to do extensive repairs.<sup>66</sup> Fifteen culverts, ranging from 12"-36" in diameter, were replaced in October 1924. Twelve more were replaced in June 1925. In the fall, a number of short wooden bridges were replaced with culverts. More culverts were constructed along the road in the fall of 1927. Two new bridges were built over Yosemite Creek and the Middle Fork of the Tuolumne River (between Harden Lake and Aspen Valley) in 1928.<sup>67</sup> New culverts were installed near Tenaya Lake in August 1929, and in September five more were built along the road, three replacing bridges and two covering open drains.<sup>68</sup>

John Andalice Meyer opened a lodge at White Wolf in 1927. The rustic hostel was a popular retreat within the park boundaries, and remained a separate inholding until the government purchased it from Meyer's family in 1951 for \$26,500.<sup>69</sup> The hostel was then leased to the Yosemite Park & Curry Company for operation. The recently reconstructed White Wolf Lodge continues to offer meals and inexpensive lodging for users of the Tioga Road.

By this time, increasing traffic loads and extensive maintenance requirements had influenced the National Park Service to reconstruct portions of the road to better accommodate users. In September 1928, Acting Superintendent E. P. Leavitt, NPS Chief Engineer Frank Kittredge, and Park Resident Engineer O. G. Taylor began inspections for a new road location in the area between Tioga Pass and Tuolumne Meadows.<sup>70</sup>

The National Park Service landscape architecture division assigned Junior Landscape Engineer John B. Wosky to Yosemite National Park at about this time as part of a program under which landscape architects would be sent to the parks during the summer seasons, returning to the San Francisco office in the off season to finish plans and drawings. Over the next decade, Wosky participated in a number of projects related to improvements to the Tioga Road. He reviewed the proposed new routes for the road in 1931, and later designed the Tioga Pass Entrance Station and Ranger Residence.<sup>71</sup>

Road crews began straightening and widening portions of the Tioga Road in the fall of 1929. At about the same time, state highway department crews began improving the Lee Vining Canyon grade east of the park boundary.<sup>72</sup>

Although the earlier proposals for a road from Yosemite Valley to the high country had apparently been shelved, in 1929 Dr. Donald Tressider of the Yosemite Park & Curry Company proposed a cable car system to convey visitors from the Valley up to Tenaya Lake. An engineer from the Adolph Bleichert Company of Austria made a study of the route, and suggested that two cable systems would be required to span the long distance and two steep grades involved. Another cableway was proposed for Glacier Point. The Yosemite National Park Board of Expert Advisors seriously considered these proposals, finding some merit in that the cableways would alleviate some congestion on the Tioga Road. But in the end the proposals were rejected on account of the inescapable high visibility of the system and a fear that visitors would find trams an unnatural attraction, rather than a means of transportation.<sup>73</sup>

The proposed route for a reconstructed road from Tioga Pass to Tuolumne Meadows was inspected again in June 1931 by Superintendent Thomson and engineers Harry S. Tolen and H. E. Alderton of the Bureau of Public Roads. The Bureau, a division of the U.S. Department of Agriculture, had taken control over major road projects in the national parks in 1925. Alderton and BPR engineer Karl E. Nissi conducted a formal location survey soon afterwards. That summer, Thomson and Wosky looked at a possible route along the Grand

Canyon of the Tuolumne for the next phase of the project.<sup>74</sup> The National Park Service determined to reconstruct the Tioga Road in three phases. The first would involve rebuilding the road between Tioga Pass and Cathedral Creek, 2 miles west of Tuolumne Meadows. The second phase called for the relocation of the eastern end of the road. The old Carl Inn-Aspen Valley-White Wolf section would largely be abandoned and replaced by a new surfaced road from Crane Flat (the junction with the new Big Oak Flat Road) to White Wolf. The work on these two sections would be done simultaneously. Funding for the reconstruction came in part from funds made available under an agreement with the City of San Francisco, under which roads earlier proposed for the Hetch Hetchy area were rejected. The city in turn transferred the road building funds to the National Park Service for other projects. The Park Service allocated the funds for the reconstruction of the two end sections of the Tioga Road. The central 21 mile section between McSwain Meadow and Cathedral Creek was not rebuilt until the late 1950s.

Construction of the 12-mile section between Tioga Pass and Cathedral Creek was authorized on 9 September 1932, and \$250,000 was allocated for the project. The contracts were advertised on 16 September and the bids were opened on 11 October at the San Francisco office of the Bureau of Public Roads. C. G. Willis & Sons, which submitted the low bid of \$225,106, was chosen as the contractor. The company established a work camp at Budd Creek near Tuolumne Meadows in November 1932, using relocated prefabricated plasterboard housing from the recently completed Olympic Games at Los Angeles.<sup>75</sup> However, due to a long winter season setting in, work could not commence on the road until the following July.

That summer, the clearing and grading work began and reinforced concrete or corrugated metal pipe culverts were placed at watercourses. The firm employed forty-five men, and used a 1 1/4-cubic yard power shovel and three 80-hp and one 60-hp caterpillar tractors. Gravel for fill work and masonry construction was taken from the Tuolumne River with a dragline; sand came from Lee Vining, and the cement from southern California. Willis & Sons also began work with twenty men on the new bridge across the Tuolumne River at Tuolumne Meadows [HAER No. CA-109]. The excavation for the bridge's piers and abutments was done in August, and by the end of the month, the masonry work was complete for abutment #1 and pier #1.<sup>76</sup> Work was fairly well along when the first snows put an end to that year's construction activity.

A proposed "High Line" route for the central part of the road was inspected in September 1933 by Wosky and Bureau of Public Roads engineers Tolen and Tom Roach. This route would have carried the road behind Mount Hoffman and through the Ten Lakes region,<sup>77</sup> but was rejected in favor of rebuilding the route along Tenaya Lake. On the western end, a survey crew under the direction of BPR engineer C. M. Sweetser surveyed the 12.75 mile section between Crane Flat and White Wolf in the late summer and fall.<sup>78</sup>

The new road was constructed to meet the revised Forest Highway Standard of 1932. Specifications for the new project called for a 26' foot width on fill sections and 28' feet in cuts. The road would have a 5 percent ruling grade and maximum grade of 6 percent. The minimum radius for curves was 350'. No retaining walls were to be used; instead, hand-laid rock embankments would be employed to avoid the appearance of road scars. At the request of the NPS landscape architecture division, clearing would be done to open up scenic vistas.<sup>79</sup>

Federal assistance programs during the Great Depression helped with the reconstruction of the Tioga Road. Crews from the Public Works Administration, the Civilian Conservation Corps, and the Emergency Conservation Works programs

began work on the partial reconstruction and realignment of the road in 1933. The Tioga Road project was the first Yosemite National Park project to utilize the relief programs. The Bureau of Public Roads was reorganized during this period as the Public Roads Administration, a division of the Federal Works Agency.

During 1933, there was renewed activity at the Tioga Mine, which had been abandoned for half a century. Antoinette Swift, widow of Rudolphus Swift's son Edward, leased the mine to a New York City consortium, the Tioga Mining Company, which resumed operations in August. The new operators found the mine tunnel and some of the buildings in remarkably well-preserved condition. After clearing the mine of gas, the company began extending the tunnel. However, this effort proved unsuccessful as well, and the property was sold for back taxes on Mrs. Swift's death in 1949.<sup>80</sup>

The 1934 work season did not open until July. Willis & Sons had 163 men at work, seeking to make up lost time, and completed the grading work on the Tioga Pass-Cathedral Creek section by the end of August; the company also finished the work on the new Tuolumne Meadows Bridge. The final work on the road segment was completed on 15 October, seventeen days behind schedule. The contractor was assessed \$850 for the delay. The old road was then obliterated by park crews, who spread boulders and trees to hide the old right-of-way. Workers also tried to hide the gravel causeway leading to the new Tuolumne River bridge with 6" of pine needles.<sup>81</sup>

Funds for more reconstruction work were made available through a compromise with the City of San Francisco over road requirements in the area around the Hetch Hetchy Reservoir. When the city published its proposed plans for the mammoth Hetch Hetchy project in 1912, it offered to undertake the construction of wagon roads, trails and "scenic drives" in the northwest corner of the park. Congress passed the Raker Act the next year authorizing the water supply and hydro-power project. One of its provisions was for the city to expend \$1.5 million on the construction of roads and trails in the area. However, the city was very slow to comply with this provision. The National Park Service found such work as was done to be unsatisfactory. City officials insisted that they were only obligated to meet the 1913 road standards in effect when the Raker Act was passed. Despite continual protests from the Park Service, the city did little road work in the area over the next two decades. By the early 1930s, the Park Service reached a settlement under which in return for \$1.25 million from the city, the NPS would take responsibility for road and trail work in the area. The money was not restricted to the Hetch Hetchy area (by this time the NPS had decided not to extend more roads in the area) but could be used anywhere in the park. After considerable study of possible alternatives (including a circuit road around the reservoir), the Park Service decided to appropriate much of the money for the reconstruction of the Tioga Road eastward from Crane Flat.<sup>82</sup>

The Idaho construction firm Morrison-Knudsen won the contract for the section between Crane Flat and White Wolf in August 1934 and planned to begin work in September. Due to uncertainty over the ultimate route for the road's central section, the eastern end of the project was shifted from White Wolf to McSwain Meadow, a little to the west. Morrison-Knudsen established a construction camp at Gin Flat in August; another camp was later established at Tamarack Flat.<sup>83</sup> Their work did not begin in September as planned, but by October they were fielding 125 men on clearing and grading operations.<sup>84</sup> An early encroachment of winter weather suspended operations not long afterwards.

Construction work was closely monitored by the park engineer and landscape architect, who wanted to avoid the scarring of trees during blasting

operations and prevent the burning of debris. The park engineer's report recorded the special care taken in blasting the exposed granite:

Close check was made of the contractor's blasting operation. Blasting diagrams were made and powder poundage watched in order to avoid as much scattering of the rock as possible. . . Holes were spaced a 4.6 foot centers and it was insisted that the holes be loaded [with dynamite] at the bottom in order to avoid scattering which would have resulted from 'muzzle-loading.' This procedure resulted in the rock breaking out pulverized in the bottom of the cuts and in large blocks at the top. It was these blocks which gave a smothering effect to the blasting operations and in general scattering of the rock was avoided.<sup>85</sup>

The large blocks of rock were in many cases salvaged for the construction of bridge abutments and buildings.<sup>86</sup>

By the time work resumed in the summer of 1935, Morrison-Knudsen had fallen further behind on the segment between Crane Flat and McSwain Meadow, and increased their work force to 240 men in an effort to make up time. By the end of September, the company had opened up nine miles and fully cleared a seven-mile stretch. All the clearing work was not complete until November, however, and the pioneer road through the section was just under construction.<sup>87</sup>

The Bureau of Public Roads awarded the contract for surfacing the Tioga Pass-Cathedral Creek section to Peninsula Paving Company of San Francisco on 25 July 1935. The company began work in September, using the existing construction camp at Budd Creek. A crusher plant was installed here, and went into service on 11 September. More delays set in, and the project engineer claimed the company mismanaged its inexperienced crew. The project had been scheduled for completion in the 1936 season, but the deadline was not met. The section was subsurfaced in the 1937 season with a seal coat and a 3" layer of granite screenings. At the Tioga Pass entrance station, the road was widened to 30' to accommodate a new checking kiosk. The paving work was finally completed and accepted by the Park Service on 22 September 1937.<sup>88</sup>

On the western part of the road, Morrison-Knudsen began work on the bridge which would carry the Crane Flat-McSwain Meadows section over the South Fork of the Tuolumne River in June 1937, excavating footings and quarrying stone for the abutments. By the end of July, the north abutment had been built, and by summer's end the other abutment was 90 percent complete. The steel beams were placed in September, and the concrete deck and curbs were poured. The bridge [HAER No. CA-108] was completed in October.<sup>89</sup>

By this time, the National Park Service had rejected the proposed "High Line" route through the Mount Hoffman-Ten Lakes-Tuolumne Canyon area, and completed work on a survey for the 21 mile section between McSwain Meadows and Cathedral Creek. The NPS proposed to let the contract the next year.<sup>90</sup> This route would follow a higher course across much exposed granite and take the road along the northern shore of Tenaya Lake. Despite the initial plans, this section was not built until the late 1950s, and at that time.

Throughout this period, the road reconstruction project was closely monitored by the Yosemite National Park Board of Expert Advisors, which wanted to prevent any significant disturbances to the park landscape. The Board of Advisors strongly objected to the proposed "high-line" route, writing that "The proposal to route the road north of Polly Dome is, in our opinion, a

grave mistake, because it would intrude a road into an area that is now and will remain wilderness in character if the road is not built," and backed the Park Service's original plans.<sup>91</sup> The Sierra Club was consulted, and the group added its approval for the project as designed. A 1934 report by club directors Francis P. Farquhar, Ernest Dawson, William E. Colby, Walter L. Huber and Duncan P. McDuffie claimed that the road improvements would "enable travelers to reach Tuolumne Meadows and the eastern portions of the park readily and with comfort." However, the club directors, emphasizing their commitment to the preservation of the park wilderness, stated that they would only support improvements to the existing road through the central section of the park, not a new alignment.<sup>92</sup>

Grading and surfacing work on the new sections of the Tioga Road resumed in June 1938. By the end of July, the section between Crane Flat and Gin Flat was surfaced. At Gin Flat, a connection with the existing (or old) Big Oak Flat Road was made; work on the new Big Oak Flat Road to Crane Flat was rapidly advancing. The paving of this section was included in the contract for the paving of the new Big Oak Flat Road, and was done by the Union Paving Company of San Francisco. The paving was completed in July 1938, and the road was opened to motorists in September.<sup>93</sup>

In summer 1939, a bituminous treatment base surface was applied to the section between Gin Flat and White Wolf. The contractor, Hayward Building Supply of Hayward, California, established its construction camp at Harden Flat. A slow-curing Type SC-1A asphalt was applied at the rate of half a gallon per square yard, spread by three 1,300-gallon tank trucks. The work was completed 14 July 1939.<sup>94</sup> Following this project, a 6-man NPS day labor crew applied a second bituminous treatment to the Crane Flat-White Wolf section. A Code 411 slow-curing asphalt from park stocks was applied to protect the surface.<sup>95</sup> In August and September of 1940, a light armor coat treatment was applied to the section between Gin Flat and McSwain Meadow. This work was done by a partnership consisting of Louis Biascotti & Son, Claude C. Wood, and Frank B. Marlas & Son, all of Stockton, California. The work was completed on 14 September.<sup>96</sup> To help meet the demands of the expected new traffic, the central or unreconstructed section between McSwain Meadows and Cathedral Creek was oiled, this work commencing in August. With the paving of the section between Tioga Pass and Cathedral Creek complete, the motorist could now travel over much of the improved route. The 11.6-mile section from Tioga Pass to Cathedral Creek was paved with a hard surface, and the next section, 34.4 miles to Aspen Valley, once a dirt track, featured an oiled surface. The road from Aspen Valley to Carl Inn, the western end of the road, was already paved.<sup>97</sup>

While work was in progress on the Tioga Road, the state widened and partially realigned the eastern slope road between Lee Vining and Lake Ellery. The work was done in 1939 and 1940 at a cost of \$78,000.<sup>98</sup>

A lack of maintenance funds during World War II forced the Park Service to close the section of road between Carl Inn and Aspen Valley. Deprived of visitors, the tourist complex at Aspen Valley closed. Some of the land remains in private inholdings. Jeremiah Hodgdon's two-story log cabin was later moved to the Pioneer Yosemite History Center at Wawona. In 1943, the Park Service allowed ranch owners at Aspen Valley to drive their cattle over the road, as gasoline and tire rationing prevented them from using trucks.<sup>99</sup>

Thomas C. Vint, chief landscape architect for the National Park Service, complained in 1948 about the incomplete central section of the road, writing that the "unsafe and inadequate outlet to the east via the Tioga route acts as a bottleneck." Vint supported the new construction, but warned that the

preservation of the landscape in the area was "highly important." The possibility of building a second, parallel lane was studied but rejected because the additional lane would cause much additional scarring.<sup>100</sup> By 1950, traffic over the road had increased 30 percent over pre-war levels, and the Park Service soon decided to reconstruct the central section.<sup>101</sup>

By the late 1940s, some leaders of the Sierra Club were reconsidering their earlier support for reconstruction of the remaining link of the Tioga Road. Harold C. Bradley, later a club director and president, was an early opponent to the road project. In August 1947, he offered a proposal to the club's board of directors, recommending that the central section of the road should only be slightly improved, and that the 25 mph speed limit over the stretch be maintained. He argued that the unreconstructed section's accident rate was among the lowest in the park, due to the low speeds required for travel over the route. If the road was widened to highway standards, he warned that it would attract "the mere restless driver and speed addict." Bradley feared that an improved highway might be kept open all year, leading to the intensive development of the Tuolumne Meadows region for winter sports activities. These consequences, Bradley claimed, would cause visitors to forget "just what a National Park is, and for what purpose it was created." In 1948, club directors Ansel Adams and Richard M. Leonard proposed an alternative route that would avoid the exposed granite country around Tenaya Lake. However, this proposal was not accepted by the board,<sup>102</sup> and the issue was far from resolved.

In the January 1950 issue of *Conservation* magazine, Bradley warned that a new high-speed road would increase the rate of serious accidents. He also saw a threat to the park's high country by opening up the terrain to more users. "If a broad highway is built the situation will inevitably change. The tide of population will rise. Crowding will begin and the developments which mass-man always requires for himself will follow." Bradley warned that in times of real or perceived national emergency, the road would become a military highway. He also suggested that reconstruction of the road would draw a new type of motorist, one not interested in the park scenery, but rather a direct east-west route to other destinations. Bradley urged that a new route be chosen over some other pass outside the park, or failing that, widening the existing route to about 14', which, with steep grades of up to 18 percent, would still limit speeds to about 25 mph. As an alternative, he suggested building a second lane parallel to the old road, a proposal already rejected by the Park Service.<sup>103</sup>

The narrow, rough and twisting central segment almost certainly inhibited many motorists from using the road. In 1955, only 31,157 of the more than one million park visitors traveled over the Tioga Road.<sup>104</sup> Winter weather also caused problems; in some years, the road was only open for three or four months. Yosemite Superintendent John C. Preston admitted that the narrow road was actually rather safe, due to the low speed limit, and that no lives had yet been lost on the road. The primary problems were traffic jams caused by vapor lock, fender-benders, trailers hung up on trees, and "the overheating of many people's tempers when a speed of 20 miles per hour was alien to their experience on a narrow mountain highway."<sup>105</sup> Preston was a staunch advocate for the reconstruction of the road.

In 1956, National Park Service Director Conrad L. Wirth announced the "Mission 66" program, a ten-year project to upgrade facilities throughout the NPS system. In Yosemite National Park, the project included the relocation of the Big Oak Flat Road from Crane Flat to the park boundary, and the reconstruction of the unimproved central section of the Tioga Road. The NPS management wanted to "open up" the High Sierra section of the park to vastly

increased numbers of visitors, and planned a new visitor center and other facilities at Tuolumne Meadows, as well as campgrounds and other facilities along the Tioga Road. The Park Service wanted to promote increased use of the High Sierra region, and also the area around Wawona, hoping to draw visitors away from the over-crowded Yosemite Valley.

Work on an 8-mile section of the central link was scheduled to start in summer 1956, but severe damage to other park roads caused by flooding in November 1955 caused Superintendent Preston to delay the work until the 1957 season.<sup>106</sup> Bids for two 3.3-mile sections were opened on 13 June 1957, the first for the stretch between McSwain Meadows and Yosemite Creek, and the second for a segment extending east from the creek. Construction was underway by late summer.<sup>107</sup>

The Sierra Club restated its earlier objections to the reconstruction. Club president Richard M. Leonard contended that a high-speed highway across the park was unnecessary and would pose serious safety problems. "The Yosemite National Park speed limit is very appropriately 35 mph, quite adequate for park display and internal park travel roads. Why then," he asked, "adopt the standards of the Crane Flat road section? [That section] invites speeds of 50 to 70 mph, so that the man who wants to travel at 35 mph and see the scenery is in danger of being hit in the rear by those who are not interested in the scenery." Leonard argued, "We don't build public thoroughfares through museums, libraries, art exhibits or cathedrals. Let us not build them through our parks." His successor as president, Alex Hildebrand, agreed with this analogy, stating "A highway down the center aisle of a cathedral would enable more people to go through it, but it would not enable more people to come there for peace and spiritual inspiration."<sup>108</sup>

On the other side of the issue was the Bureau of Public Roads, which pushed for an even wider road. The BPR argued that changing road standards now dictated a wide road with wide shoulders was required, in order that disabled vehicles could pull off the road. The BPR notified the Park Service that, unless the wider road standards were accepted, it would not undertake the project.<sup>109</sup> Although Director Wirth had accepted the proposal for the high-speed road, he was unwilling to approve the wider road proposal. He stated, "I have given definite instructions that I do not want a fast road. I want a narrow road, because it is the width of the road that controls the speed."<sup>110</sup> The matter was referred to engineer Walter Huber, now chairman of the Board of Expert Advisors for Yosemite National Park.<sup>111</sup> Huber reiterated his support for the Park Service's original plans, and offered advice on appropriate design standards:

I feel the Tioga Pass road is and must remain essentially a park road. For this purpose I consider the 20 foot width of pavement to be satisfactory, i.e., two 10 foot width travel lanes. For the "Section in Through Fills," I would recommend that the 3' 0" shoulder on either side of the road be widened to 4' 0". I note that this is to be a stabilized base grass shoulder. I hope this specification will be retained with insistence, otherwise, shoulders are soon coated and from the motorists' viewpoint look the same as pavement; thus we have in effect a 24 foot pavement without shoulders and once the motorist is over the edge he is often in trouble."<sup>112</sup>

Huber supported the remaining Park Service proposed road standards, including a 2-foot shoulder on level road sections. The Bureau of Public Roads accepted Huber's compromise and agreed to undertake the project.<sup>113</sup>

Opposition continued to gather nonetheless. One of the most vocal opponents was Ansel Adams. The celebrated photographer had long been associated with Yosemite, and came to live there after marrying Virginia Best, daughter of Harrie C. Best, who ran a photographic studio in Yosemite Valley. Adams, an outspoken advocate for the protection of the wilderness, was aghast when he learned of the Park Service's plan to push the new road along the edge of Tenaya Lake and across the granite domes to the southwest. Adams had originally supported the alternate route north of Mount Hoffman, which would have followed McGee Creek to meet the existing road at the west end of Tuolumne Meadows, avoiding the Tenaya Lake region.<sup>114</sup>

To Adams, the Tenaya Lake area was the heart of the high country. In July 1957, he tried to rally the Sierra Club, of which he was a director, to vigorously oppose the proposed road alignment. In a letter to the club's leaders, he wrote: "Is it necessary to desecrate the Lake Tenaya area by construction of a road of 'highway' standards? What justification can they (the National Park Service) present for such a road? . . . Tenaya Lake is infinitely more important than the Park Service." If the Sierra Club would not take immediate action, Adams stated he would resign and fight the project on his own.<sup>115</sup> Bradley and the other directors rejected his resignation, but still hoped to be able to reach a compromise with the Park Service. When no such agreement was reached, the club directors reluctantly joined the opposition to the project.<sup>116</sup>

The controversy caused a major crisis within the ranks of the Sierra Club. Some of the club leaders continued to support the Park Service's plans for the reconstruction of the road. Former club president William E. Colby, who as a young attorney had helped Stephen Mather with the acquisition of the road for the park, remained an advocate of the road improvement project. Colby was so angered by the club's stance that he resigned from the board of directors. Another former club president, Walter Huber, as a civil engineer had formerly consulted with the Park Service on road projects, and had reviewed and approved the preliminary plans for the central portion of the road in the 1930s. Huber argued that the Sierra Club, having supported the original plans for the road improvements, could not now turn its back on the Park Service. Edgar Wayland, chairman of the club's Conservation Committee, and his wife, Peggy, wrote an article supporting the road for the April 1956 issue of the *Sierra Club Bulletin* in which they argued that 90 percent of the money allocated to Yosemite's Mission 66 road projects was devoted to the reconstruction of existing park roads. They did, however, complain that the Park Service had not solicited the involvement of the club and other outdoor groups in the planning of the project.<sup>117</sup> In return, NPS Director Wirth charged that the Sierra Club, long an ally of the Park Service, had turned against the agency.<sup>118</sup>

Despite the conservationists' objections, the National Park Service on 8 July 1958 ordered the contractor to begin work on the controversial section. The Sierra Club immediately began a virulent public campaign to seek an adjustment in the road plans, and club officers and members bombarded NPS and Interior Department officials with telegrams and letters of protest. In particular, the Sierra Club objected to a proposed "high level" route of the road over a prominent granite dome to the southwest of Tenaya Lake. The road was designed to pass over the brow of the dome, where a parking area would be provided to offer a vista of the Tenaya Canyon and the rear side of Half Dome. The club, fearing unsightly scarring of the exposed granite, sought to have the road rerouted along the base of the dome, and to have the vista accessible only to motorists willing to leave their cars for a short hike up onto the mountainside. On 4 August, the Sierra Club asked Wirth to shut down the work and to make a personal inspection of the project.<sup>119</sup>

Two days later, Wirth ordered the Bureau of Public Roads to halt construction on a 1.2-mile section of the road. He then came to Yosemite to inspect the project and to meet with park staff and the Sierra Club opponents of the road. Following the meeting, Wirth announced that a compromise had been reached over the road location, but the Sierra Club had only been able to win a route 100' or so lower on the granite dome, and the construction would result in great scarring of the landscape. The Park Service rejected the club's proposed lower alignment for the road, claiming it would have too steep a grade for safe motoring; one official stated "We might as well build a hospital at the foot of the hill." Project opponents failed to impress their arguments on Congress, and work resumed. The new route was blasted across the exposed granite around Tenaya Lake. The controversy added to the cost of the project; the work stoppage cost about \$7192, and the minor realignment itself added some \$40,000 to the bill.<sup>120</sup>

While the final construction of the Tioga Road was in progress, the California Department of Highways announced plans to upgrade the connecting section of Highway 120 between Tioga Pass and Lee Vining. Although National Park Service landscape architect Volney Westley attempted to persuade the state to construct its new road down Lundy Canyon, the state determined to rebuild the existing route down Lee Vining Creek Canyon; cost of the new road, which would drop about 4000' into the Mono Lake Basin, was estimated in September 1958 at \$2.5 million. At the same time, the Park Service was completing arrangements for the reconstruction of the Big Oak Flat Road between the western terminus of the Tioga Road at Crane Flat and the east boundary.<sup>121</sup>

After the Tioga Road work had progressed through the contested Tenaya Lake region, Ansel Adams penned a scathing article on the project for the *Sierra Club Bulletin*. He decried the work, stating "Good engineering is appropriate engineering, not construction show-off!" He blasted the Park Service for allowing a borrow pit to be opened in view of the road at the base of little Pywiack Dome. Adams wailed about the "750,000 cubic yards of national park sacrificed on a Procrustean roadbed!"<sup>122</sup>

Faced for the first time with serious opposition to its Yosemite road policy, Interior Department officials and supporters became defensive. Secretary of the Interior Stewart Udall stated, "Personally, I am a strong believer in wilderness preservation, and you can depend on me to scrutinize all problems and activities of the National Park Service with this viewpoint clearly in my mind. On the other hand, I feel very strongly that the people do have a right to enjoy their parks."<sup>123</sup> William E. Colby again spoke up for the choice of the Lake Tenaya-Olmsted Point route, claiming that the alternative route around Mount Hoffman would invade a wilderness area and cost far more to construct.<sup>124</sup>

The controversy over the road improvements greatly angered Yosemite Park Superintendent John C. Preston, who reacted by making personal attacks on the project's opponents. In preliminary remarks before a presentation on the road delivered at the Park Service's Region Four conference at Death Valley National Monument in January 1959, he called Ansel Adams a "champion of low standard roads" and a self-appointed savior of the wilderness. He derided Sierra Club president David Brower as "an egoist," with an "excessive love for himself."<sup>125</sup> In his presentation, Preston defended the Park Service's undertaking, alleging that the Bureau of Public Roads had sought to build a route to even higher standards. The NPS had challenged the more drastic BPR plans, and referred the matter to Dr. Walter Huber, chairman of the National Park Service advisory board and a former Sierra Club president. Huber supported the Park Service proposal, and the project was undertaken.<sup>126</sup>

Superintendent Preston sought to keep the old section of the Tioga Road between May Lake and Tenaya Lake open as a scenic loop, but the proposal was rejected by the Park Service's regional office. NPS Region IV Director Lawrence C. Merriam, a former Yosemite superintendent, told Preston in October 1960 that the office was determined to return part of the old route to wilderness. Merriam pointed out that keeping the old road open would make the arguments used in defense of the realignment seem hypocritical.<sup>127</sup>

In January 1961, Superintendent Preston suggested naming the new vista on the granite dome southwest of Tenaya Lake for Frederick Law Olmsted, the celebrated landscape architect and early Yosemite Grant Commissioner, and for his son, the F. L. Olmsted, Jr., also a noted landscape architect and member of the Yosemite National Park Board of Expert Advisors.<sup>128</sup> As the Olmsteds had urged that park projects be planned to have a minimal impact on the landscape, the naming of the vista on the scarred dome carried a certain irony.

The completed Tioga Road was dedicated on 24 June 1961. Director Wirth, speaking at the ceremony held at Olmsted Point, defended the road's placement, saying "I'm making no apologies for the Tioga Road." Total cost of the reconstruction project was \$5,491,000.<sup>129</sup>

The California Department of Highways state rebuilt the existing road up Lee Vining Creek Canyon between 1963 and 1967.<sup>130</sup> For the first time, a modern highway crossed the High Sierra through Yosemite. The Tioga Pass crossing is today the highest paved highway in California. Commercial trucking is not permitted on the highway.

Faced with ever-increasing traffic, the National Park Service considered several alternatives for the Tioga Road in its draft 1978 General Management Plan. Alternative Two of the plan called for closing the road to all except trans-Sierran motorists, and instituting a shuttle service to provide access within the park. Campgrounds along the road would be converted to walk-in sites. The removal of cars would certainly have helped reduce the impact on the high country; however, the construction of a 1,500-car parking lot near Tioga Pass would have severely affected this pristine area. This alternative was rejected in the final plan, and no changes in use were specified for the Tioga Road.<sup>131</sup>

The Federal Highway Administration (FHWA) conducted a parkwide road system evaluation in 1989. The study noted that high speeds on the improved Tioga Road had led to a number of fatal accidents, just as opponents had predicted. The most troublesome section of the road was the exposed granite area at Olmsted Point, which had a number of accidents and was occasionally blocked by snow slides. The exfoliating granite was protected by park regulations, therefore the FHWA offered several alternatives to widening the road in a broader cut. The agency suggested that a snowshed might be employed, or that the road might be extended out on cantilever sections or fill. As a final alternative, one or both lanes could be rerouted along the old Tioga Road in the May Lake area.<sup>132</sup> As of this writing, none of the proposals have been adopted.

Some portions of the old road may still be traveled. From the Evergreen Road which runs from near the Big Oak Flat Entrance Station to Mather through the Stanislaus National Forest, a paved section of the old road extends nearly four miles towards Aspen Valley, and an unpaved section continues on as far as this inholding. Another segment can be driven on from the new road to White Wolf Lodge, and other sections serve as access roads to the Yosemite Creek Campground and the May Lake High Sierra Camp. A service road uses part of the old route continuing northwest from White Wolf to service stables at

Harden Lake. Other portions of the road may still be followed on foot, though some sections in wilderness areas have been partially obliterated.

III. ENDNOTES

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